# A lesson on Return on Equity (ROE) and how Electric Utilities Make Money

Electric utilities are monopolies. They are regulated by entities called Public Utility Commissions (PUCs) or their equivalents at the state level to protect the interests of their customers who have little or no alternative for electricity. In exchange for granting the exclusive right to sell electricity in a given service territory and operate what is usually an illegal business practice in the US (monopolies), PUCs determine how much and in what the utility is allowed to invest, how much it can charge, and what its profit margin can be.

This relationship is called the "regulatory compact," and it was first laid out in the Binghamton Bridge Supreme Court case of **1865**. The court stated, "*if you will embark, with your time, money, and skill, in an enterprise which will accommodate the public necessities, we will grant to you, for a limited time period or in perpetuity, privileges that will justify the expenditure of your money, and the employment of your time and skill."* This law was written at a time when the US Government was encouraging utilities to expand into sparsely or unsettled parts of the country, certainly not the case today.

PUCs determine a utility's total revenue requirement in what is called a rate case. The revenue requirement represents the amount of money a utility must collect to cover its costs and make a reasonable profit. The simplified formula looks like this:

*Total Revenue Requirement = Rate Base × Allowed Rate of Return + Expenses*

The "rate base" is the value of the company's assets minus accumulated depreciation. The allowed return on assets, or Return on Equity (ROE) drives a utility's profitability. Expenses are simply passed through to customers. By having a set rate of return, **utilities essentially are incentivized to make unnecessary investments in order to increase their rate base and profits**. They also have limited incentive to keep expenses in check and costs are passed through to customers. Utilities are regulated and their allowed ROE is set by PUCs.

In the US, utility company average ROE is 10.13%. In North and South Carolina, ROE is calculated at 10.2%

Duke wants to build a larger power plant than is needed for the Asheville market. The power plant design is called Combined Cycle. The 650 Megawatt Combined Cycle plant will generate a lot more power than is needed for WNC. By virtue of the design it can't be "throttled back" to reduce power generated when not needed. If properly designed, Duke would be able to create a properly sized solution that could be cycled up or down as power is needed with more generation capability added as needed later. The transmission lines and the substation in Campobello would not be needed.

There's a problem with this idea though: ROE. Duke is not making money because people are conserving. Electric utilities all over are facing a similar problem and the only way they can make money is by convincing Public Service Commissions to allow them to spend a LOT of money on construction projects. Every dollar Duke spends on building projects (capital expenditures) results in

10.2% of ROE. When completed, Duke will realize about $87 Million in the first year and over the 30 year lifetime, about $1.25 Billion.

Does their really exist "public need" for Duke's "Modernization Project"?

Duke wants to build this plant, transmission lines and substation in order to spend $1.1 billion and receive the 10.2% ROE. In the process they will destroy a lot of property, land values and people's lives. Where is the "public need" in all of this? We really deserve to know. Our history, our present and the future of generations to come depend on it.

**You may not have transmission lines in your back yard but you'll feel it in your back pocket.**

For more information or to view the source of this letter, go to:
http://www.theenergycollective.com/coley-girouard/2220891/how-do-electric-utilities-make-money